

jp02088782/pn

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1991:63268 CAPLUS  
DOCUMENT NUMBER: 114:63268  
ENTRY DATE: Entered STN: 23 Feb 1991  
TITLE: Coating of cermets with diamond for cutting tools  
INVENTOR(S): Sato, Yasushi; Saito, Yukio; Gomi, Kenichi; Nishimura, Shigeoki; Sakoda, Kotaro  
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan; Babcock-Hitachi K. K.  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
INT. PATENT CLASSIF.:  
MAIN: C23F017-00  
SECONDARY: C23F004-00  
CLASSIFICATION: 36-4 (Physical Properties of Synthetic High Polymers)  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02088782	A2	19900328	JP 1988-239771	19880927 <--
			JP 1988-239771	19880927

PRIORITY APPLN. INFO.:

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 02088782	ICM	C23F017-00
	ICS	C23F004-00
	IPCI	C23F0017-00 [ICM,5]; C23F0004-00 [ICS,5]

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ABSTRACT:

Cermets for cutting tools are etched by a plasma contg. CO, H<sub>2</sub>O, and/or hydrogen halide to remove Co and/or Ni from the surface and coated with diamond. Thus, a cermet contg. TiC 20, Co 6, Ni 6, and WC 66% was etched by plasma contg. 2 CO and 98 vol.% H and coated with 2-.mu.m diamond. The bonding strength of diamond coating was 2.1-2.7 kg/mm<sup>2</sup> vs. 0.1-0.2 kg/mm<sup>2</sup> without plasma etching.